

KIH-485 preemergence weed control in field corn at Dekalb, Illinois. Moody, James L., Dawn. E. Nordby, and F. William Simmons. The objectives of this study are to evaluate the 1X and 2X rates of KIH-485 60 WG, weed control spectrum of KIH-485, and to determine the optimum ratio of KIH-485 and atrazine as a premix. This study was established at the Northern Illinois Agronomy Research Center at DeKalb, Illinois in 2004. The soil is a Flanagan silt loam with an organic matter of 6% and a pH of 6.2. Conventional spring tillage and fertilization was done on the research area. Pioneer 33G29 LL/YG was planted 1.5 inches deep on April 29 at 35,500 seeds per acre in 30 inch rows. The experimental design was a randomized complete block with 3 replications of plots 10 by 28 feet. Herbicides were applied with a CO₂ backpack sprayer delivering 20 gpa and equipped with a Teejet AI-110025. Application information is listed below:

Date	April 29
Treatment	pre
Temperature	
Air	62° F
Soil (4 inch)	56° F
Relative Humidity (%)	74
Soil moisture	moist
Wind (mph)	4
Sky	overcast
Precip. After application	
Week 1 (inch)	0.21
Week 2 (inch)	2.96

Minimal crop injury from KIH-485 early was not evident by 69 DAT (Days After Treatment). All herbicide treatments showed excellent giant foxtail control at the last evaluation date. Velvetleaf and common lambsquarters weed control was excellent by all KIH-485 treatments and premixes as well as s-metolachlor&atrazine&mesotrione&benoxacor as Lumax and metolachlor&atrazine&mesotrione &benoxacor as Lexar at the last evaluation date in this trial. A slight increase in broadleaf weed control may be attributed to the higher atrazine amount in the KIH ATZ-C versus KIH ATZ-B formulation. (Department of Crop Sciences, University of Illinois, Urbana).

Table 1. KIH-485 preemergence weed control in field corn at Dekalb, Illinois. (Moody, Nordby, and Simmons).

Treatment	Appl. Rate	Appl. time	ZEAMD 5/19	SETFA 5/19	AMBTR 5/19	CHEAL 5/19	ABUTH 5/19
	(lb/A)		(%)	(%)	(%)	(%)	(%)
KIH-485	0.19	pre	1	99	97	98	89
KIH-485	0.22	pre	1	97	95	99	95
S-metolachlor&benoxacor	1.59	pre	0	93	94	99	79
KIH-485	0.37	pre	0	98	90	99	95
S-metolachlor&benoxacor	3.18	pre	0	98	76	99	80
KIH-485&atrazine (B) ¹	0.186 + 1.194	pre	1	99	97	99	95
S-metolachlor&atrazine&benoxacor	1.25 + 1.63	pre	1	99	94	99	72
KIH-485&atrazine (C) ²	0.186 + 1.634	pre	0	99	96	99	91
Untreated check	-	-	0	0	0	0	0
S-metolachlor&atrazine&benoxacor	1.56 + 2.02	pre	2	99	98	99	82
S-meto&atrazine&mesotrione&benoxacor ³	2.0+0.75+0.2	pre	2	98	95	99	98
S-meto&atrazine&&mesotrione&benoxacor ⁴	1.52+1.52+0.19	pre	1	99	97	99	98
LSD (0.05)			3	4	20	1	11

¹ Formulation B premix of KIH-485&atrazine; ² Formulation C premix of KIH-485&atrazine; ³ Lumax; ⁴ Lexar.

Table 2. KIH-485 preemergence weed control in field corn at Dekalb, Illinois. (Moody, Nordby, and Simmons).

Treatment	Appl. Rate	Appl. time	ZEAMD 6/15	SETFA 6/15	AMBTR 6/15	CHEAL 6/15	ABUTH 6/15
	(lb/A)		(%)	(%)	(%)	(%)	(%)
KIH-485	0.19	pre	4	99	96	97	93
KIH-485	0.22	pre	4	99	93	97	93
S-metolachlor&benoxacor	1.59	pre	2	99	70	89	77
KIH-485	0.37	pre	11	99	93	99	96
S-metolachlor&benoxacor	3.18	pre	2	99	74	95	90
KIH-485&atrazine (B) ¹	0.186+1.194	pre	1	97	93	99	93
S-metolachlor&atrazine&benoxacor	1.25+1.63	pre	3	99	87	99	84
KIH-485&atrazine (C) ²	0.186+1.634	pre	6	99	97	99	95
Untreated check	-	-	0	0	0	0	0
S-metolachlor&atrazine&benoxacor	1.56 + 2.02	pre	1	99	98	99	89
S-meto&atrazine&mesotrione&benoxacor ³	2.0+0.75+0.2	pre	6	99	99	99	96
S-meto&atrazine&&mesotrione&benoxacor ⁴	1.52+1.52+0.19	pre	0	99	99	99	99
LSD (0.05)			5	2	24	5	8

¹ Formulation B premix of KIH-485&atrazine; ² Formulation C premix of KIH-485&atrazine; ³ Lumax; ⁴ Lexar.

Table 3. KIH-485 preemergence weed control in field corn at Dekalb, Illinois. (Moody, Nordby, and Simmons).

Treatment	Appl. Rate	Appl. time	ZEAMD 7/07	SETFA 7/07	AMBTR 7/07	CHEAL 7/07	ABUTH 7/07
	(lb/A)		(%)	(%)	(%)	(%)	(%)
KIH-485	0.19	pre	0	99	96	91	91
KIH-485	0.22	pre	0	99	89	99	94
S-metolachlor&benoxacor	1.59	pre	0	93	73	67	70
KIH-485	0.37	pre	0	99	88	99	96
S-metolachlor&benoxacor	3.18	pre	0	99	71	93	77
KIH-485&atrazine (B) ¹	0.186 + 1.194	pre	0	97	91	99	93
S-metolachlor&atrazine&benoxacor	1.25 + 1.63	pre	0	99	78	96	78
KIH-485&atrazine (C) ²	0.186 + 1.634	pre	0	99	93	99	96
Untreated check	-	-	0	0	0	0	0
S-metolachlor&atrazine&benoxacor	1.56 + 2.02	pre	0	99	96	99	78
S-meto&atrazine&mesotrione&benoxacor ³	2.0+0.75+0.2	pre	0	99	98	99	98
S-meto&atrazine&&mesotrione&benoxacor ⁴	1.52+1.52+0.19	pre	0	97	99	99	99
LSD (0.05)			0	3	25	12	12

¹ Formulation B premix of KIH-485&atrazine; ² Formulation C premix of KIH-485&atrazine; ³ Lumax; ⁴ Lexar.